

**Notice of Allowability**

Application No.

10/666,916

Applicant(s)

FARINA

Examiner

Art Unit

Andrew W. Johns

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 02 May 2005.
2. ☒ The allowed claim(s) is/are 1,3-20 and 22-50.
3. ☒ The drawings filed on 02 May 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 9/19/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it MUST be submitted  
5 no later than the payment of the issue fee.

The application has been amended as follows:

In the specification, amend the paragraph beginning at line 3 of page 1 to read:

--This application is a continuation of U.S. Application No. 09/640,346, filed on August 16, 2000, U.S. Patent No. 6,665,421, which claims the benefit of U.S. Provisional  
10 Application No. 60/149,171, filed on August 17, 1999. The entire teachings of the above applications are incorporated herein by reference.--

2. The following is an examiner's statement of reasons for allowance: None of the prior art teaches or suggests the invention, as variously claimed. While Sankar et al.  
15 teaches analyzing images of spray plumes, Sankar et al. fails to teach or suggest measuring a central axis of a spray plume, as now stipulated by claims 1 and 20; displaying a set of images of the spray plume so as to exhibit a time evolution of the spray plume along a plane, as stipulated by claims 40 and 41; defining a line on one or more image to delineate an axis of the spray and measuring spray plume parameters  
20 along the axis, as required by claims 42 and 46; using one or more calibrating components to associate physical coordinates with image coordinates within each set of images, as defined in claims 44 and 48; and subtracting a background image from all images in the set and integrating the set of images to exhibit a summary representation of

the images for measuring one or more parameters of the summary representation, as stipulated in claim 50. None of the other prior art teaches or suggests any of these features, so that these claims are allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Claims 1, 3-20 and 22-50 (now renumbered for issue as 1, 2-19 and 20-48, respectively) are allowed.

4. The examiner has noted that the references on the second sheet of the PTO-1449 for the IDS filed 19 September 2003 attached to the previous Office Action were not initialed. These references were considered, and a new initialed copy of the PTO-1449 is attached.

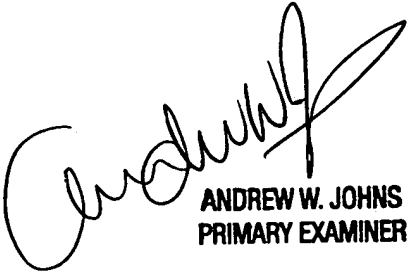
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited papers each shows that the use of high speed photography to capture spray plume geometry is known. However, none of these papers teaches or suggests the various features specifically stipulated by the various independent claims discussed above.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (571) 272-7391. The examiner is normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03)

5 If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Joseph Mancuso, can be reached at (571) 272-7695. The current fax phone number for this art unit is (703) 872-9306. However this number is scheduled to change and beginning July 15, 2005, faxes should be sent to (571) 273-8300. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

10 Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Receptionist whose telephone number is (571) 272-2600.

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A. Johns  
6 July 2005

  
ANDREW W. JOHNS  
PRIMARY EXAMINER